



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/575,009

12/12/2006

Horst Keller

2584SG-4

6999

22442

7590

10/06/2009

SHERIDAN ROSS PC  
1560 BROADWAY  
SUITE 1200  
DENVER, CO 80202

EXAMINER

KHATRI, PRASHANT J

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

10/06/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                       |                                      |  |
|------------------------------|---------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/575,009  | <b>Applicant(s)</b><br>KELLER ET AL. |  |
|                              | <b>Examiner</b><br>PRASHANT J. KHATRI | <b>Art Unit</b><br>1794              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/2/2009</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

In response to Amendments/Arguments filed 6/8/2009. Claims 1-21 are pending.  
Claims 1, 5-11, 14-17, and 19-20 were amended. Claim 21 was added as new.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 10-14, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Battigelli et al. (**US 5601628**) in view of Erskine (**US 6074967**), Bernard et al. (**US 5554324**), and Vignesoult et al. (**US 6284684**) with evidence from Trabbold et al. (**WO 02/070417**).

3. Battigelli et al. disclose a method for the production of mineral wool and mineral wool produced thereof. Prior art discloses a material composition comprising common mineral-based compounds found within comparable silica-based insulation materials (**col. 9, lines 1+**). As shown by prior art, fiberization occurs at temperatures of at least 1200°C, therefore Examiner takes the position that the fusion point of the material would therefore occur at a temperature higher than 1200°C, which would meet the parameters of the present claim. It is noted, however, that prior art discloses that the formation of

Art Unit: 1794

beads is dependent on viscosity (**col. 4, lines 35+**) and the pressure of the blower within the apparatus (**col. 8, lines 42+**). Examiner takes the position that the reduction of beads is an optimization feature and may be adjusted by varying the pressure of the blower. It is noted that the process is an internal centrifuging process in a spinner (**abstract**). However, prior art is silent to the use of a binding, the exact claimed composition, and fiber diameters produced.

4. Erskine discloses the use of a fibrous binding agent comprised of cellulose fibers and the like (**col. 3, lines 34+**). Furthermore, the fibrous agent may be present at amounts of 5%, 7%, and 10% by weight of the total ingredients (**col. 4, lines 27+**). Examiner notes that the binding agent inclusion of an about 5% would therefore meet the present claim. Furthermore, it is noted that cellulose is considered to be an organic material and would thereby meet the presently claimed binding material.

5. Bernard et al. discloses a method for producing mineral wool. Examiner notes that this reference is incorporated by reference by Battigelli and Battigelli is incorporated into the present disclosure (**col. 18, lines 19+**). It is noted that the apparatus disclosed by prior art produces fibers having diameters of about 3.2 microns to 4.7 microns, wherein the fiber diameters are dependent on pull rate and temperature (**col. 18, lines 26+**).

6. As evidenced by Trabbold et al., a product of finer fibers can be less dense than one of coarse fibers resulting in same insulating values. Furthermore, as shown by Trabbold, the material disclosed by prior art has a density of 9 kg/m<sup>3</sup> as a result of the processing. Examiner regards the presently claimed density as dependent on the

Art Unit: 1794

composition and further the processing orifices which as shown by prior art effect the gram weight (**pp. 17-21; specifically disclosures on Tables 3 and 5**). Therefore, one of ordinary skill in the art would have known to produce materials that vary in density depending on the application.

7. Vignesoult et al. disclose a mineral wool composition comprising the following:

|   |         |
|---|---------|
| SiO <sub>2</sub>  | 39-55%, |
| Al <sub>2</sub> O <sub>3</sub>                          | 16-27%, |
| CaO   | 3-35%,  |
| MgO   | 0-15%,  |
| Na <sub>2</sub> O                                       | 0-15%,  |
| K <sub>2</sub> O  | 0-15%,  |
| R <sub>2</sub> O (Na <sub>2</sub> O + K <sub>2</sub> O) | 10-17%, |
| P <sub>2</sub> O <sub>5</sub>                           | 0-3%,   |
| Fe <sub>2</sub> O <sub>3</sub>                          | 0-15%,  |
| B <sub>2</sub> O <sub>3</sub>                           | 0-8%,   |
| TiO <sub>2</sub>  | 0-3%,   |

8. The disclosed ranges as shown above encompass or equal the presently claimed ranges. Prior art further discloses the composition may include 2% to 3% of unanalyzed impurities. Concerning the alkali/earth alkali ratio, Examiner notes that Ex. 2 in Table 1 shows that the ratio is less than 1 (**col. 4, lines 30-31**). Examiner takes the position that the material would therefore meet the standard presently claimed in claim 10.

9. Note that while Erskine does not disclose all the features of the present claimed invention, Erskine is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, the use of binders in mineral wool materials in order to decrease the brittleness

Art Unit: 1794

of the material and in combination with the primary reference, discloses the presently claimed invention.

10. All of the elements were known within the art in individual disclosures; however each is silent to containing all the elements presently claimed. The motivation to combine Erskine to Battigelli and Bernard stems from the fact that binding agents allow for an increase in strength and decrease in brittleness when the material undergoes compression for shipping. Furthermore, it is noted that the increase in strength decreases the amount of failed products and thereby increasing consumer satisfaction. Therefore, it would have been obvious to one of ordinary skill in the art to apply a binder disclosed by Erskine into the materials disclosed by Bernard and Battigelli. Additionally, the formation of beads during processing is known within the art to be the cause of product failure. Examiner notes that Battigelli discloses the formation of beads may be reduced by optimizing blower pressure. Therefore, it would have been obvious to one of ordinary skill in the art to adjust the blower pressure to minimize the formation of beads and thereby reduce product failure. Vignesoult et al. disclose a mineral wool composition that encompasses the presently claimed ranges. The motivation to use the composition into the process disclosed by Battigelli and Bernard is that the composition of Vignesoult yields a material that has satisfactory biosolubility and considered to be less environmentally and physiologically harmful to lifeforms. Thus, it would have been obvious to include this composition to create an environmentally friendly material in conjunction with the binders disclosed by Erskine, which improve strength for shipping purposes to the processes disclosed by Battigelli and Bernard. Concerning the

Art Unit: 1794

standards that are presently claimed in claims 4-6, 10, and 12, Examiner takes the position that if the materials meet the elements that are presently claimed, the material would therefore meet the standards that are presently claimed.

11. Claim 8 and 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Battigelli et al. in view of Erskine, Bernard et al., and Vignesoult et al. with evidence from Tabbold et al. as applied to claims 1 and 7 above, and further in view of Syme et al. (**US 5900298**).

12. Battigelli et al., Erskine, and Bernard et al. are silent to the compression ratio.

13. Syme et al. disclose a mineral fiber insulation that is of a density that encompasses the presently claimed density when converted (**col. 4, lines 59+**).

Additionally, prior art discloses a range for compression ratios that are suitable for shipping purposes of 4 to 10:1 (**col. 10, lines 65+**). Examiner notes that the ratios signify the roll having an uncompressed material as the first number and the second number as the compressed material. Thus, the compression ratio is equivalent to the presently claimed material as the first number is the compressed material and the second number is the uncompressed material.

14. However, note that while Syme et al. do not disclose all the features of the present claimed invention, Syme et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a

Art Unit: 1794

certain concept; namely, the range for compression ratios suitable for shipping purposes and it would have been obvious to combine with the primary reference, in order to disclose the presently claimed invention.

15. All of the elements were known within the art. The only difference is a single disclosure containing all of the presently claimed elements. Battigelli et al., Erskine, and Bernard et al. are silent to the compression ratio. Syme et al. disclose a mineral fiber insulation that is of a density that encompasses the presently claimed density when converted. Additionally, prior art discloses a range for compression ratios that are suitable for shipping purposes of 4 to 10:1. The motivation to combine the references is drawn towards a material that is capable of being transported without damaging the material. Therefore, it would have been obvious to one of ordinary skill in the art to produce a material that has the above compression ratios so shipping can be maximized and then produce a batt that can decompress into a normal size.

16. Claims 9, 15, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Battigelli et al. in view of Erskine and Bernard et al. as applied to claim 1 above, and further in view of Bihy et al. (**DE3612857**).

17. Battigelli et al., Erskine, and Bernard et al. disclose the above but are silent to the use of markings as cutting aids and within a system for clamping insulation material between rafters.

18. Bihy et al. show the use of cutting markings that appears to be the exact same as the claimed invention. Figure 1 of prior art shows the marking regions wherein a knife



Art Unit: 1794

or other cutting instrument may be used to cut an appropriate amount of material for use as insulation. Concerning claim 15, prior art discloses a mineral fiber insulating material to be used as a roof rafter clamping material between adjacent beams (**FIG. 2**).

19. Note that while Bihiy et al. do not disclose all the features of the present claimed invention, Bihiy et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, the use of mineral wool materials as roof insulation materials and in combination with the primary reference, discloses the presently claimed invention.

20. All of the elements were known within the art individually but not within a single disclosure for all of the claimed elements. Bihiy et al. disclose a mineral fiber insulation material that has markings on the surface for cutting purposes and further the system for applying the material to roof rafters. The motivation to combine is drawn from the fact the material disclosed when combined by Battigelli et al., Erskine, and Bernard et al. provide for an environmentally safe and strong material that will provide excellent thermal insulation properties. Therefore, it would have been obvious to one of ordinary skill in the art to apply a binder material for shipping purposes and further, markings for sizing purposes. Furthermore, it would have been obvious to one of ordinary skill in the art to take advantage of the mineral insulation in a system wherein the insulation is aligned and clamped down between beams to take advantage of the environmentally-

Art Unit: 1794

friendly elements and strength elements for a superior product compared to comparable products within the marketplace.

### ***Response to Arguments***

21. Applicant's arguments, see p. 9, filed 6/8/2009, with respect to the objection of claims 8 and 13 have been fully considered and are persuasive. The objection of the above claims has been withdrawn.

22. Applicant's arguments, see p. 9, filed 6/8/2009, with respect to the 35 USC 112, 2<sup>nd</sup> paragraph rejections of claims 6-9, 16-17, and 19 have been fully considered and are persuasive. The rejection of the above claims has been withdrawn.

Applicant's arguments filed 6/8/2009 regarding the 35 USC 103(a) rejections have been fully considered but they are not persuasive. Applicant asserts that there is no motivation provided by Erskine to include a binder into the resultant mineral wool of Battigelli, Bernard, and Trabbold. The Courts have made clear that the teaching, suggestion, or motivation test is flexible and an explicit suggestion to combine the prior art is not necessary. Given that binder as disclosed by Erskine is an organic binder that is found in the present range and provides for better handling and strength, it is clear that the motivation is present for one of ordinary skill in the art to apply a binder material (**col. 3, lines 39+**). Further, it is noted that Applicant has not provided any materials regarding the binder and since Erskine discloses an organic binder present in a mineral wool in the amount presently claimed, it is clear that Erskine meets the present limitations. Applicant further asserts that no motivation is provided Bernard and

Art Unit: 1794

Trabbold regarding why the material should have particular diameters. However, it is noted that the reduction of gram weight while maintaining the desired insulating characteristics provides cost savings (*Trabbold; p. 19, lines 6+*). Concerning the Bihiy reference, Applicant asserts that the prior art provides a binding that is above the presently claimed range. Examiner notes that Bihiy was not used to teach the amount of binding but the present limitations of the cutting marks and use of such an insulation for roofing of claims 9, 15, and 21.

### ***Conclusion***

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRASHANT J. KHATRI whose telephone number is

Art Unit: 1794

(571)270-3470. The examiner can normally be reached on M-F 8:00 A.M.-5:00 P.M.  
(First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/  
Supervisory Patent Examiner, Art Unit 1794

PRASHANT J KHATRI  
Examiner  
Art Unit 1794